

[illegible]

OF
VO

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[illegible]

```
1 0001 0 MODULE OPC$STATUS
2 0002 0
3 0003 0 LANGUAGE (BLISS32),
4 0004 0 IDENT = 'V04-000'
5 0005 0 ) =
6 0006 0
7 0007 0
8 0008 0 *
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29 0029 0 *
30 0030 0 *
31 0031 0 *
32 0032 0 *
33 0033 0 *
34 0034 0 *
35 0035 0 *
36 0036 0 *
37 0037 0 *
38 0038 0 *
39 0039 0 *
40 0040 0 *
41 0041 0 *
42 0042 0 *
43 0043 0 *
44 0044 0 *
45 0045 0 *
46 0046 0 *
47 0047 0 *
48 0048 0 *
49 0049 0 *
50 0050 0 *
51 0051 0 *
52 0052 0 *
53 0053 0 *
54 0054 0 *
55 0055 0 *
56 0056 0 *
57 0057 0 *
```

++
FACILITY:
OPCOM

ABSTRACT:
This module contains the specialized logic to service
a particular type of request sent by a user to OPCOM.

Environment:
VAX/VMS operating system.

Author:
Steven T. Jeffreys

Creation date:
March 10, 1981

Revision history:
V03-002 CWH3001 CW Hobbs 30-Jul-1983
Various and sundry things to make OPCOM distributed
across the cluster.
V03-001 STJ3036 Steven T. Jeffreys, 07-Oct-1982

OPC\$STATUS
V04-000

H 9
16-Sep-1984 01:57:10
14-Sep-1984 12:50:58

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[OPCOM.SRC]STATUS.B32;1 Page 2 (1)

```
.. 58      0058 0  |      Handle implicitly canceled requests.
.. 59      0059 0  |
.. 60      0060 0  |  --
.. 61      0061 0  |
.. 62      0062 1  | BEGIN                                ! Start of STATUS
.. 63      0063 1  |
.. 64      0064 1  | LIBRARY 'SYS$LIBRARY:LIB.L32';
.. 65      0065 1  | LIBRARY 'LIB$OPCOMLIB';
.. 66      0066 1  |
.. 67      0067 1  | FORWARD ROUTINE
.. 68      0068 1  |      STATUS_HANDLER : NOVALUE;
.. 69      0069 1  |
.. 70      0070 1  | BUILTIN
.. 71      0071 1  |
.. 72      0072 1  |      INSQUE,                        ! Insert entry onto a queue
.. 73      0073 1  |      REMQUE;                       ! Remove entry from a queue
```

```

75 0074 1 GLOBAL ROUTINE STATUS_HANDLER (BUFFER_DESC) : NOVALUE =
76 0075 1
77 0076 1 ++
78 0077 1 Functional description:
79 0078 1
80 0079 1 This routine is the handler for all STATUS messages received by OPCOM.
81 0080 1
82 0081 1
83 0082 1 Input:
84 0083 1
85 0084 1 BUFFER_DESC : The address of a quadword buffer descriptor that
86 0085 1 describes the buffer containing the message.
87 0086 1
88 0087 1 Implicit Input:
89 0088 1
90 0089 1 None.
91 0090 1
92 0091 1 Output:
93 0092 1
94 0093 1 None.
95 0094 1
96 0095 1 Implicit output:
97 0096 1
98 0097 1 Some accounting data will be updated
99 0098 1 to reflect the receipt of the message.
100 0099 1
101 0100 1 Side effects:
102 0101 1
103 0102 1 None.
104 0103 1
105 0104 1 Routine value:
106 0105 1
107 0106 1 None.
108 0107 1 --
109 0108 1
110 0109 2 BEGIN ! Start of STATUS_HANDLER
111 0110 2
112 0111 2 MAP
113 0112 2
114 0113 2 BUFFER_DESC : $ref_bblock;
115 0114 2
116 0115 2 EXTERNAL ROUTINE
117 0116 2 CHECK_REQUEST, ! Common sanity checks
118 0117 2 DEALLOCATE_RQCB, ! Dispose of an RQCB
119 0118 2 FIND_OPERATOR, ! Locate a given operator
120 0119 2 FORMAT_MESSAGE, ! Format an OPCOM message
121 0120 2 IMPLICITLY_CANCELED, ! See if the request is dead
122 0121 2 IMPLIED_CANCEL, ! Perform cancellation
123 0122 2 INTERPRET_MASK, ! Interpret attention mask
124 0123 2 NOTIFY_OPERATOR, ! Notify a given operator
125 0124 2 VALID_OPERATOR; ! See if operator device is valid
126 0125 2
127 0126 2 LOCAL
128 0127 2 MESSAGE_VECTOR : VECTOR [5, LONG], ! Message info
129 0128 2 STATUS_DESC : $desc_block, ! Status message descriptor
130 0129 2 STATUS_BUF : $bblock [OP($K_MAXREAD)], ! Status message buffer
131 0130 2 RQCB : $ref_bblock, ! RQCB data structure
```

```

132 0131 OPER_RQCB : $ref_bblock, ! ditto (for known operator)
133 0132 RQST_RQCB : $ref_bblock, ! ditto (for request RQCB)
134 0133 OCD : $ref_bblock, ! OCD data structure
135 0134 MCB : $ref_bblock, ! MCB data structure
136 0135 RQST_COUNT : LONG, ! Count of requests
137 0136 STATUS : LONG;
138 0137
139 0138
140 0139 Check the minimum request size. If not
141 0140 enough data, then ignore the message.
142 0141
143 0142 IF .BUFFER_DESC [DSC$W_LENGTH] LSS (OPC$K_COMHDRSIZ + OPC$K_STATUS_MIN_SIZE)
144 0143 THEN
145 0144 RETURN;
146 0145
147 0146 Do some common sanity checking, and get an RQCB.
148 0147
149 0148 IF NOT CHECK_REQUEST (.BUFFER_DESC, RQCB)
150 0149 THEN
151 0150 RETURN;
152 0151
153 0152 Make sure this is a valid operator device.
154 0153
155 0154 IF NOT VALID_OPERATOR (.BUFFER_DESC, .RQCB)
156 0155 THEN
157 0156 BEGIN
158 0157 DEALLOCATE_RQCB (.RQCB); ! Dismiss the request
159 0158 RETURN;
160 0159 END;
161 0160
162 0161 See if this is a valid operator. If not, then dismiss the request.
163 0162
164 0163 IF NOT FIND_OPERATOR (.RQCB, OPER_RQCB)
165 0164 THEN
166 0165 BEGIN
167 0166 MESSAGE_VECTOR [0] = OPC$_ILLRQST; ! Set message code
168 0167 MESSAGE_VECTOR [1] = 0; ! Use current time of day
169 0168 FORMAT_MESSAGE (.RQCB, MESSAGE_VECTOR); ! Format the message
170 0169 NOTIFY_OPERATOR (.RQCB); ! Notify the requestor
171 0170 DEALLOCATE_RQCB (.RQCB); ! Dispose of the RQCB
172 0171 RETURN; ! Dismiss the request
173 0172 END;
174 0173
175 0174 The operator is known to opcom. Send the operator
176 0175 the standard status message.
177 0176
178 0177 STATUS_DESC [0,0,32,0] = OPC$K_MAXREAD; ! Set buffer size
179 0178 STATUS_DESC [DSC$A_POINTER] = STATUS_BUF; ! Set buffer address
180 0179 IF NOT INTERPRET_MASK (OPER_RQCB [RQCB_L_ATTNMASK1], STATUS_DESC, STATUS_DESC)
181 0180 THEN
182 0181 BEGIN
183 0182 DEALLOCATE_RQCB (.RQCB);
184 0183 RETURN;
185 0184 END
186 0185 ELSE
187 0186 BEGIN
188 0187 MESSAGE_VECTOR [0] = OPC$_OPERSTS; ! Set message code

```



```
189 0188 MESSAGE_VECTOR [1] = 0; ! Use current date and time
190 0189 MESSAGE_VECTOR [2] = RQCB [RQCB_L_OPER_LEN]; ! Set operator device name
191 0190 MESSAGE_VECTOR [3] = STATUS_DESC; ! Set status message descriptor
192 0191 FORMAT_MESSAGE (.RQCB, MESSAGE_VECTOR); ! Format the message
193 0192 NOTIFY_OPERATOR (.RQCB); ! Send status message to the requestor
194 0193 END;
195 0194
196 0195 ! Scan through the list of request queued for this OCD.
197 0196 ! If the requestor is enabled to handle the request, inform
198 0197 ! the operator of the request.
199 0198
200 0199 OCD = .OPER_RQCB [RQCB_L_OCD]; ! Get OCD address
201 0200 RQST_COUNT = .OCD [OCD_W-RQSTCOUNT]; ! Get count of requests
202 0201 RQST_RQCB = .OCD [OCD_L-RQSTFLINK]; ! Get address of first RQCB
203 0202 WHILE (.RQST_COUNT GTR 0) DO
204 0203 BEGIN
205 0204
206 0205 ! Compare the attention masks of the requests against
207 0206 ! the attention masks of the operator. If any bits are
208 0207 ! in common, then notify the operator of the request.
209 0208
210 0209 IF ((.OPER_RQCB [RQCB_L_ATTNMASK1] AND .RQST_RQCB [RQCB_L_ATTNMASK1]) NEQ 0)
211 0210 OR ((.OPER_RQCB [RQCB_L_ATTNMASK2] AND .RQST_RQCB [RQCB_L_ATTNMASK2]) NEQ 0)
212 0211 THEN
213 0212 IF NOT IMPLICITLY_CANCELED (.RQST_RQCB)
214 0213 THEN
215 0214 BEGIN
216 0215 MCB = .RQCB [RQCB_L_MCB]; ! Save MCB address
217 0216 RQCB [RQCB_L_MCB] = .RQST_RQCB [RQCB_L_MCB]; ! Inform the operator
218 0217 NOTIFY_OPERATOR (.RQCB); ! Restore MCB address
219 0218 RQCB [RQCB_L_MCB] = .MCB;
220 0219 END;
221 0220 RQST_COUNT = .RQST_COUNT - 1; ! Decrement the request count
222 0221 RQST_RQCB = .RQST_RQCB [RQCB_L_FLINK]; ! Get address of next request
223 0222 END;
224 0223
225 0224 IMPLIED_CANCEL (); ! Process any implicit cancellations
226 0225 DEALLOCATE_RQCB (.RQCB); ! Dismiss the request.
227 0226
228 0227 1 END; ! End of STATUS_HANDLER
```

```
.TITLE OPC$STATUS
.IDENT \V04-000\
```

```
.EXTRN CHECK_REQUEST, DEALLOCATE_RQCB
.EXTRN FIND_OPERATOR, FORMAT_MESSAGE
.EXTRN IMPLICITLY_CANCELED
.EXTRN IMPLIED_CANCEL, INTERPRET_MASK
.EXTRN NOTIFY_OPERATOR
.EXTRN VALID_OPERATOR
```

```
.PSECT $CODES, NOWRT, 2
```

```
.ENTRY STATUS_HANDLER, Save R2,R3,R4,R5,R6,R7
MOVAB NOTIFY_OPERATOR, R7
MOVAB -2596(SP), SP
```

```
: 0074
:
:
```

```
57 0000G 00FC 00000
SE F5DC CE 9E 00002
CE 9E 00007
```

0044	BF	04	BC	B1	0000C	CMPW	@BUFFER_DESC, #68	0142
			01	1E	00012	BGEQU	1\$	
				04	00014	RET		
			5E	DD	00015	1\$: PUSHL	SP	0148
0000G	CF	04	AC	DD	00017	PUSHL	BUFFER_DESC	
	01		02	FB	0001A	CALLS	#2, CHECK_REQUEST	
			50	E8	0001F	BLBS	R0, 2\$	
				04	00022	RET		
	53		6E	DD	00023	2\$: MOVL	RQCB, R3	0154
			53	DD	00026	PUSHL	R3	
0000G	CF	04	AC	DD	00028	PUSHL	BUFFER_DESC	
	27		02	FB	0002B	CALLS	#2, VALID_OPERATOR	
			50	E9	00030	BLBC	R0, 3\$	
		04	AE	9F	00033	PUSHAB	OPER_RQCB	0163
			53	DD	00036	PUSHL	R3	
0000G	CF		02	FB	00038	CALLS	#2, FIND_OPERATOR	
	1D		50	E8	0003D	BLBS	R0, 4\$	
EC	AD	0005807C	8F	DD	00040	MOVL	#360572, MESSAGE_VECTOR	0166
		FO	AD	D4	00048	CLRL	MESSAGE_VECTOR+4	0167
		EC	AD	9F	0004B	PUSHAB	MESSAGE_VECTOR	0168
			53	DD	0004E	PUSHL	R3	
0000G	CF		02	FB	00050	CALLS	#2, FORMAT_MESSAGE	
			53	DD	00055	PUSHL	R3	0169
	67		01	FB	00057	CALLS	#1, NOTIFY_OPERATOR	
			008A	31	0005A	BRW	9\$	0170
E4	AD	0A00	8F	3C	0005D	4\$: MOVZWL	#2560, STATUS_DESC	0177
E8	AD	08	AE	9E	00063	MOVAB	STATUS_BUF, STATUS_DESC+4	0178
		E4	AD	9F	00068	PUSHAB	STATUS_DESC	0179
		E4	AD	9F	0006B	PUSHAB	STATUS_DESC	
	54	0C	AE	DD	0006E	MOVL	OPER_RQCB, R4	
		5C	A4	9F	00072	PUSHAB	92(R4)	
0000G	CF		03	FB	00075	CALLS	#3, INTERPRET_MASK	
	6A		50	E9	0007A	BLBC	R0, 9\$	
EC	AD	000580C3	8F	DD	0007D	MOVL	#360643, MESSAGE_VECTOR	0187
		FO	AD	D4	00085	CLRL	MESSAGE_VECTOR+4	0188
F4	AD	7C	A3	9E	00088	MOVAB	124(R3), MESSAGE_VECTOR+8	0189
F8	AD	E4	AD	9E	0008D	MOVAB	STATUS_DESC, MESSAGE_VECTOR+12	0190
		EC	AD	9F	00092	PUSHAB	MESSAGE_VECTOR	0191
			53	DD	00095	PUSHL	R3	
0000G	CF		02	FB	00097	CALLS	#2, FORMAT_MESSAGE	
			53	DD	0009C	PUSHL	R3	0192
	67		01	FB	0009E	CALLS	#1, NOTIFY_OPERATOR	
	50	24	A4	DD	000A1	MOVL	36(R4), OCD	0199
	55	3A	A0	3C	000A5	MOVZWL	58(OCD), RQST_COUNT	0200
	52	3C	A0	DD	000A9	MOVL	60(OCD), RQST_RQCB	0201
			55	D5	000AD	5\$: TSTL	RQST_COUNT	0202
			31	15	000AF	BLEQ	8\$	
5C	A2	5C	A4	D3	000B1	BITL	92(R4), 92(RQST_RQCB)	0209
			07	12	000B6	BNEQ	6\$	
60	A2	60	A4	D3	000B8	BITL	96(R4), 96(RQST_RQCB)	0210
			1C	13	000BD	BEQL	7\$	
			52	DD	000BF	6\$: PUSHL	RQST_RQCB	0212
0000G	CF		01	FB	000C1	CALLS	#1, IMPLICITLY_CANCELED	
	12		50	E8	000C6	BLBS	R0, 7\$	
	56	6C	A3	DD	000C9	MOVL	108(R3), MCB	0215
6C	A3	6C	A2	DD	000CD	MOVL	108(RQST_RQCB), 108(R3)	0216
			53	DD	000D2	PUSHL	R3	0217

OPC\$STATUS
V04-000

M 9
16-Sep-1984 01:57:10
14-Sep-1984 12:50:58

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[OPCOM.SRC]STATUS.B32;1 Page 7
(2)

6C	67	01	FB	000D4	CALLS	#1, NOTIFY_OPERATOR	:	
	A3	56	D0	000D7	MOVL	MCB, 108(R3)	:	0218
		55	D7	000DB	DECL	RQST_COUNT	:	0220
	52	62	D0	000DD	MOVL	(RQST_RQCB), RQST_RQCB	:	0221
		CB	11	000E0	BRB	5\$:	0202
0000G	CF	00	FB	000E2	CALLS	#0, IMPLIED_CANCEL	:	0224
		53	DD	000E7	PUSHL	R3	:	0225
0000G	CF	01	FB	000E9	CALLS	#1, DEALLOCATE_RQCB	:	
		04	000EE	RET			:	0227

; Routine Size: 239 bytes, Routine Base: \$CODE\$ + 0000

: 229 0228 1
: 230 0229 1 END
: 231 0230 0 ELUDOM

! End of STATUS

PSECT SUMMARY

Name	Bytes	Attributes
\$CODE\$	239	NOVEC,NOWRT, RD , EXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)

Library Statistics

File	----- Total	Symbols Loaded	----- Percent	Pages Mapped	Processing Time
_\$255\$DUA28:[SYSLIB]LIB.L32;1	18619	6	0	1000	00:01.8
_\$255\$DUA28:[OPCOM.OBJ]OPCOMLIB.L32;1	633	13	2	43	00:00.8

COMMAND QUALIFIERS

; BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS\$:STATUS/OBJ=OBJ\$:STATUS MSRC\$:STATUS/UPDATE=(ENH\$:STATUS)

; Size: 239 code + 0 data bytes
; Run Time: 00:07.6
; Elapsed Time: 00:30.1
; Lines/CPU Min: 1820
; Lexemes/CPU-Min: 10195
; Memory Used: 103 pages
; Compilation Complete

0292 AH-BT13A-SE
VAX/VMS V4.0

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